

**Appl. No.** : 10/036,150  
**Filed** : December 26, 2001

### **AMENDMENTS TO THE CLAIMS**

1-21. (Cancelled).

22. (Previously presented) An isolated nucleic acid having at least 80% nucleic acid sequence identity to:

- (a) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45;
- (b) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45, lacking its associated signal peptide;
- (c) a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:45, wherein the extracellular domain is amino acids 77-310;
- (d) the nucleic acid sequence of SEQ ID NO:44;
- (e) the full length coding sequence of the nucleic acid sequence of SEQ ID NO:44; or
- (f) the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

23. (Previously presented) The isolated nucleic acid of Claim 22 having at least 85% nucleic acid sequence identity to:

- (a) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45;
- (b) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45, lacking its associated signal peptide;
- (c) a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:45, wherein the extracellular domain is amino acids 77-310;
- (d) the nucleic acid sequence of SEQ ID NO:44;
- (e) the full length coding sequence of the nucleic acid sequence of SEQ ID NO:44; or
- (f) the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

**Appl. No.** : 10/036,150  
**Filed** : December 26, 2001

24. (Currently amended) The isolated nucleic acid of Claim 22 having at least 90% nucleic acid sequence identity to:

- (a) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45;
- (b) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45, lacking its associated signal peptide;
- (c) a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:45, wherein the extracellular domain is amino acids 77-310;
- (d) the nucleic acid sequence ~~shown in Figure 19~~ (of SEQ ID NO:44);
- (e) the full length coding sequence of the nucleic acid sequence of SEQ ID NO:44; or
- (f) the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

25. (Currently amended) The isolated nucleic acid of Claim 22 having at least 95% nucleic acid sequence identity to:

- (a) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45;
- (b) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45, lacking its associated signal peptide;
- (c) a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:45), wherein the extracellular domain is amino acids 77-310;
- (d) the nucleic acid sequence of SEQ ID NO:44;
- (e) the full length coding sequence of the nucleic acid sequence ~~shown in Figure 19~~ (of SEQ ID NO:44); or
- (f) the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

26. (Currently amended) The isolated nucleic acid of Claim 22 having at least 99% nucleic acid sequence identity to:

- (a) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45;

(b) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45, lacking its associated signal peptide;

(c) a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:45, wherein the extracellular domain is amino acids 77-310;

(d) the nucleic acid sequence ~~shown in Figure 19 (~~ of SEQ ID NO:44);

(e) the full length coding sequence of the nucleic acid sequence of SEQ ID NO:44; or

(g) the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

27. (Currently amended) An isolated nucleic acid comprising:

(a) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45;

(b) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45, lacking its associated signal peptide;

(c) a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:45, wherein the extracellular domain is amino acids 77-310;

(d) the nucleic acid sequence of SEQ ID NO:44;

(e) the full length coding sequence of the nucleic acid sequence ~~shown in Figure 19 (~~ of SEQ ID NO:44); or

(f) the full-length coding sequence of the cDNA deposited under ATCC accession number 203966.

28. (Previously presented) The isolated nucleic acid of Claim 27 comprising a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45.

29. (Previously presented) The isolated nucleic acid of Claim 27 comprising a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45, lacking its associated signal peptide.

30. (Previously presented) The isolated nucleic acid of Claim 27 comprising a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:45, wherein the extracellular domain is amino acids 77-310.

31. (Cancelled)

32. (Previously presented) The isolated nucleic acid of Claim 27 comprising the nucleic acid sequence of SEQ ID NO:44.

33. (Previously presented) The isolated nucleic acid of Claim 27 comprising the full-length coding sequence of the nucleic acid sequence of SEQ ID NO:44.

34. (Previously presented) The isolated nucleic acid of Claim 27 comprising the full-length coding sequence of the cDNA deposited under ATCC accession number 203966.

35. (Currently amended) An isolated nucleic acid that hybridizes under stringent conditions to:

- (a) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45;
- (b) a nucleic acid sequence encoding the polypeptide of SEQ ID NO:45, lacking its associated signal peptide;
- (c) a nucleic acid sequence encoding the extracellular domain of the polypeptide of SEQ ID NO:45, wherein the extracellular domain is amino acids 77-310;
- (d) the nucleic acid sequence ~~shown in Figure 19~~ (of SEQ ID NO:44);
- (e) the full length coding sequence of the nucleic acid sequence of SEQ ID NO:44; or
- (g) the full-length coding sequence of the cDNA deposited under ATCC accession number 203966;

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation; and

wherein said stringent conditions comprise 50% formamide, 5 x SSC (0.75 M NaCl, 0.075 M sodium citrate), 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5 x Denhardt's solution, sonicated salmon sperm DNA (50 µg/ml), 0.1% SDS, and 10% dextran sulfate at 42°C, with washes at 42°C in 0.2 x SSC (sodium chloride/sodium citrate) and 50% formamide at 55°C, followed by a high-stringency wash consisting of 0.1 x SSC containing EDTA at 55°C.

36-37 (Cancelled).

38. (Previously presented) A vector comprising the nucleic acid of Claim 22.

39. (Previously presented) The vector of Claim 38, wherein said nucleic acid is operably linked to control sequences recognized by a host cell transformed with the vector.

40. (Previously presented) An isolated host cell comprising the vector of Claim 38.

**Appl. No.** : 10/036,150  
**Filed** : December 26, 2001

41. (Previously presented) The isolated host cell of Claim 40, wherein said cell is a CHO cell, an *E. coli* or a yeast cell.